

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of)

MULLET et al.)

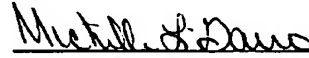
Serial No.: 10/588,569)

Filed: August 4, 2006)

For: OPERATING SYSTEM UTILIZING A)
SELECTIVELY CONCEALED MULTI-)
FUNCTION WALL STATION)
TRANSMITTER WITH AN AUTO-)
CLOSE FUNCTION FOR A)
MOTORIZED BARRIER OPERATOR)

CERTIFICATE OF MAILING

I hereby certify that this correspondence was deposited with the United States Postal Service as first class mail in an envelope addressed to: MAIL STOP 16, Director of the U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria VA 22313-1450, on this 29th day of June, 2007.



Michelle L. Garro, Sec'y to Andrew B. Morton

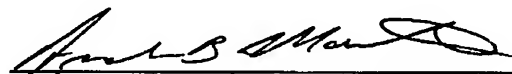
TRANSMITTAL SHEET

Enclosed are the following:

- Request for Refund (w/attached Certificate of Mailing) 3 pgs
- Copy of Filing Receipt mailed May 11, 2007 (Exhibit A)
- Copy of Substitute Specification as filed August 4, 2006 (Exhibit B)
- Copy of Form PTO-1390 as filed August 4, 2006 (Exhibit C)
- Copy of Form PTO-2038 as filed August 4, 2006 (Exhibit D)
- Copy of Deposit Account Statement for May 2007 (Exhibit E)
- Return Receipt Postcard

No fee is believed due with the submission of this document.

Respectfully submitted,



Andrew B. Morton, Reg. No. 37,400
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Attorney for Applicants

Attorney Docket No. WAY.P.US0095A

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Michelle L. Garro
 Michelle L. Garro, Sec'y to Andrew B. Morton

**REQUEST FOR REFUND
 (IMPROPER CHARGE OF DEPOSIT ACCOUNT)**

MAIL STOP 16
 Director of the U.S. Patent and Trademark Office
 P.O. Box 1450
 Alexandria, VA 22313-1450

Sir:

I. REFUND REQUEST

This is a request for a refund with respect to the charge to Deposit Account No. 18-0987, shown on the statement dated May 2007 for the above-identified patent application.

A copy of the monthly statement in which the error occurs accompanies this request.

II. FEES CHARGED FOR WHICH REFUND REQUESTED

| | | |
|-------|--|-------|
| _____ | Filing Fee | _____ |
| _____ | Surcharge for filing the basic filing fee on a date later than the filing date of the application (37 CFR §1.16(e)) | _____ |
| | and/or | _____ |
| _____ | Surcharge for filing the oath or declaration on a date later than the filing date of the application (37 CFR §1.16(e)) | _____ |

| | | |
|-------------------------|----------------------------------|-----------------------|
| _____ | Extension of Term | _____ |
| _____ | _____ first month | _____ |
| _____ | _____ second month | _____ |
| _____ | _____ third month | _____ |
| _____ | _____ fourth month | _____ |
| <u> X </u> | Excess claims | <u> \$2,300.00 </u> |
| _____ | Issue Fee | _____ |
| _____ | Petition Fee | _____ |
| _____ | Patent Maintenance Fee | _____ |
| _____ | _____ first maintenance fee | _____ |
| _____ | _____ second maintenance fee | _____ |
| _____ | _____ third maintenance fee | _____ |
| _____ | Patent maintenance fee surcharge | _____ |
| _____ | Other | _____ |
| TOTAL REFUND REQUESTED: | | <u> \$2,300.00 </u> |

III. EXPLANATION OF WHY CONTESTED CHARGE IS IN ERROR

The Patent and Trademark Office has charged our Deposit Account 18-0987 for \$800.00 and \$1,500.00 (\$2,300.00 total) related to Application Serial No. 10/588,569. It is our understanding that these fees have been designated as "independent claims in excess of three" and "claims in excess of twenty" respectively.

The undersigned Attorney respectfully requests a refund to our Deposit Account 18-0987 for both charges, as I believe them to be in error.

The above-identified application was filed in the United States Patent and Trademark Office as a §371 application of International Application No. PCT/US2005/003757 on April 4, 2006. A copy of the filing receipt received May 17, 2007 is attached at Exhibit A. The International Application originally contained fifty (50) claims, consisting of seven (7) independent and forty three (43) dependent claims.

The above-identified application was filed with a substitute specification consisting of thirteen (13) claims, two (2) independent and eleven (11) dependent. A copy of the filed

application is attached as Exhibit B. A copy of form PTO-1390, totaling three (3) pages is attached as Exhibit C and shows the appropriate fee calculations. Attached as Exhibit D is a copy of Form PTO-2038 Credit Card Authorization for the filing fee of \$900.00.

It is respectfully submitted that the number of claims submitted was in fact clearly stated on Form PTO-1390 (Exhibit C), and further evidenced by pages 22-24 of the substitute specification (Exhibit B) submitted with the filing papers. Notation that a substitute specification was being filed was clearly designated by designation of block 15 on form PTO-1390. A request for a corrected filing receipt is being filed contemporaneously herewith.

Accordingly, a refund of the \$800.00 and \$1,500.00 charges (total of \$2,300.00) assessed on May 10, 2007 is respectfully requested as these charges were incorrectly assessed. Should any questions arise in review of this request a telephone call to the undersigned Attorney would be greatly appreciated.

IV. MANNER OF REFUND

Please make refund by crediting Account No. 18-0987.

Respectfully submitted,



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Attorney for Applicants

Attorney Docket No. WAY.P.US0095A

EXHIBIT A



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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| APPL NO. | FILING OR 371(c) DATE | ART UNIT | FIL FEE REC'D | ATTY. DOCKET NO | TOT CLMS | IND CLMS |
|------------|--------------------------|----------|---------------|-----------------|----------|----------|
| 10/588,569 | 08/04/2006 | 2837 | 3200 | WAY.P.US0095A | 50 | 7 |

CONFIRMATION NO. 8308

Andrew B Morton
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RECEIVED

MAY 17 2007

RENNER, KENNER, GREIVE,
 BOBAK, TAYLOR & WEBER

FILING RECEIPT



OC000000023810026

Date Mailed: 05/11/2007

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please mail to the Commissioner for Patents P.O. Box 1450 Alexandria Va 22313-1450. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

Applicant(s)

Willis J. Mullet, Gulf Breeze, FL;
 James S. Murray, Milton, FL;
 David B. Davies, Pace, FL;

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 Tim Hodgkiss--54173

Domestic Priority data as claimed by applicant

This application is a 371 of PCT/US05/03757.02/04/2005

Foreign Applications

UNITED STATES OF AMERICA 10/773,479 02/06/2004

If Required, Foreign Filing License Granted: 05/10/2007

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US10/588,569**

Projected Publication Date: 08/16/2007

**OPERATING SYSTEM UTILIZING A SELECTIVELY
CONCEALED MULTI-FUNCTION WALL STATION
TRANSMITTER WITH AN AUTO-CLOSE FUNCTION
FOR A MOTORIZED BARRIER OPERATOR**

5

CROSS REFERENCE TO RELATED APPLICATIONS

This is a § 371 application of PCT/US2005/003757 filed February 4, 2005, which is a continuation-in-part application of United States Patent application serial number 10/773,479 filed February 6, 2004, wherein both applications are expressly incorporated herein by reference.

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TECHNICAL FIELD

Generally, the present invention relates to a garage door operator system for use on a closure member moveable relative to a fixed member. More particularly, the present invention relates to a wall station transmitter for controlling the operation of a movable barrier, such as a gate or door, between a closed position and an open position. More specifically, the present invention relates to a wired or wireless wall station control for a door or gate operator, wherein the wall station has a plurality of buttons or touch pad keys which may be selectively concealed, and wherein actuation of a button implements a corresponding function of the operating system. One function in particular provides an auto-close function which automatically closes the movable barrier after a pre-determined period of time.

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BACKGROUND ART

As is well known, garage doors or gates enclose an area to allow selective ingress and egress to and from the area. Garage doors initially were moveable by hand. But due to their weight and the inconvenience of opening and closing the door, motors are now connected to the door. Control of such a motor may be provided by a hard-wired push button which, when actuated, relays a signal to an operator controller that starts the motor and moves the door in one direction until a limit position is reached. After the door has stopped and the button is pressed again, the motor moves the door in an opposite direction. Garage door operators are now provided with safety features which stop and reverse the door travel when an obstruction is encountered. Other safety devices, such as photocells and sensors, detect whenever there is an obstruction within the path of the door and send a

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signal to the operator to take corrective action. Remote control devices are now also provided to facilitate the opening and closing of the door without having to get out of the car. The prior art also discloses various other features which enhance the convenience of opening and closing a garage door as follows.

5 U.S. Patent No. 4,119,896, to Estes, III et al., discloses a sequencing control circuit provided for a door operator motor which is connected to open and close a garage door as controlled by signals from manual switches and load switches. The sequencing control circuit includes time means with a first time period in the order of six to eight seconds. This permits a person to hold a push button switch closed for about six to eight seconds so
10 that a slab door may be opened against a snow drift which otherwise would have so much torque requirement on the motor that an overload switch would stop the motor. Enabling means is provided to enable the motor during this time period yet to disable the constant signal from the push button for periods longer than this time period so that the door operator motor then is responsive to signals from the load switches. The sequencing
15 control circuit also includes a latch circuit having an output in a feedback loop to maintain the latch circuit latched upon a momentary input control signal. This allows time for the motor to accelerate the load to a normal running condition and to open any closed limit switch or closed torque switch during this acceleration period.

U.S. Patent No. 4,247,806, to Mercier, discloses a garage door opener including a
20 radio receiver and a push button, each operable to initiate a pulse for effecting a switching device which, in turn, energizes a latching relay. Operation of the latching relay completes an energizing circuit to the appropriate winding of a reversible motor which moves the door toward an open or closed position. A sensing circuit is operable for effecting the reversal of the latching relay to change the direction of motor operation in the
25 event the door engages an object in its path. A foot switch may also be provided for positively sensing an obstacle and reversing the drive motor. A transmitter may be provided with an impulse circuit to limit the duration of the system actuating signal regardless of how long the transmitter push button is depressed.

U.S. Patent No. 4,607,312, to Barreto-Mercado, discloses a system that eliminates
30 the conventional automobile door and trunk locks and provides power operated locks remotely controlled by a VHF radio transmission which is coded with two code signals, one of which energizes the door locks to locking condition and the other of which causes door or trunk unlocking, the trunk unlocking being activated only if a trunk transfer push

button switch has been operated. The unlocking code may also activate the electric power to the engine starter motor, hood and manual switches of the power door operating motor. The system provided by the invention for unlocking or locking the doors of an automobile and for unlocking the trunk and hood of the same automobile as well as the engine electric power, all from outside the automobile permits the removal of the conventional mechanical door locking mechanism, including both the external key-operated apparatus and that controlled by an internal push button, and the removal of the conventional key-operated mechanical trunk lock, and the substitution of an externally operable radio controlled lock and unlock system for the door and an unlock system for the trunk and hood.

U.S. Patent No. 4,808,995, to Clark et al., discloses a radio remote-controlled door operator for use, among other uses, as a residential garage door operator. The transmitter contains two buttons, one to produce normal door operation and the other to set the operator into a "secure" mode, wherein it will be non-responsive to further valid operating codes until reset. In addition, a second deeper level of security may be established by means of a vacation switch which disconnects the operator from the AC power supply. The operator system comprises a microprocessor which is programmed to perform various accessory functions even though the accessories may not be present. Various microprocessor inputs are tied to a false "safe" level so that even though the accessory programs are run, no outputs result and no interference with normal door operation is produced.

U.S. Patent No. 5,086,385, to Launey et al., discloses a system for and a method of providing an expandable home automation controller which supports multiple numbers and multiple different types of data communications with both appliances and subsystems within the home as well as systems external to the home. The system is based upon a central processor, such as a microprocessor-based computer, and is connected by means of a data bus to control the various products and subsystems within a home or commercial building, such as lighting systems, security systems, various sensors, multiple external terminals, as well as to allow for the input of commands by a variety of means such as touch-screens, voice recognition systems, telephones, custom switches or any device capable of providing an input to a computer system. The system functions can be readily controlled by the user utilizing a high resolution graphics display and associated touch-screen interface.

U.S. Patent No. 5,848,634, to Will et al., discloses an apparatus for controlling operation of a motorized window shade, the apparatus comprising a drive circuit for driving an electric motor operating the window shade; and a control circuit for controlling the operation of the driver circuit, the control circuit including a microprocessor. The microprocessor is coupled to first and second switches for enabling driving of the electric motor in respective first and second directions corresponding to upward and downward movement of the window shade. The apparatus also includes a program switch, wherein the microprocessor of the control circuit is programmed to allow setting of the upper and lower limits of travel of the window shade. The microprocessor is also programmed with a program to set a first of the limits of travel. The window shade is adjusted to a desired upper or lower level limit position using at least one of the first and second switches, the program switch is then actuated followed by the actuation of one of the first and second switches to set a first of the limits. The window shade is then adjusted to a desired position for a second of the limits using at least one of the first and second switches. The program switch is again actuated, and the other of the first and second switches is actuated to set the second of the limits.

U.S. Patent No. 5,864,297, to Sollestre et al., discloses a remote keyless entry system including a remote key fob or transmitting unit which may be carried by the user. This fob may transmit coded function signals directing the vehicle to perform requested functions, e.g., unlock the doors, and an on-board receiver that receives the request and performs the function. The receiver may be reprogrammed by the customer to accept signals from a different transmitter in the event that the key fob is either lost or stolen. To program the receiver, the system is put in a programming mode by using a transmitter whose security code is already stored within the receiver. This programming mode is entered by depressing specified buttons on the transmitting unit for a predetermined amount of time. Once in the programming mode, all previous security codes are erased, and a new transmitting unit code may be programmed into the receiver by depressing any button on that unit. The receiver will chime to acknowledge to the customer that the new security code has been accepted.

U.S. Patent No. 6,326,754 to Mullet, et al. discloses a wireless operating system utilizing a multi-functional wall station for a motorized door/gate operator includes an operator for controlling the movement of a door/gate between various positions. The system has an operator with a receiver and a wall station transmitter for transmitting a

signal to the receiver. The signal initiates separate operator functions in addition to opening and closing of the door/gate. A remote transmitter may send a remote signal received by the receiver, wherein the receiver is capable of distinguishing between the wall station signal and the remote signal. The wall station includes a transmitter programming button, wherein actuation of the transmitter programming button places the receiver in a learn mode, and wherein subsequent actuation of the remote transmitter positively identifies the remote transmitter for use with the operator. A light powered by the operator and a light actuation button provided by the wall station transmitter is included in the system. Actuation of the light actuation button functions to switch the light on or off. A pet height button, provided by the wall station transmitter, selectively positions the height of the gate/door from its fully closed position to allow ingress and egress of a pet. A delay-close button closes the door/gate after a predetermined period of time. Actuation of a door installation button sequences the door/gate and said operator through various operational parameters to establish a door operating profile. All of the buttons on the wall station are exposed which allows some of them to be accidentally actuated. A keyless entry transmitter and a second wall station may also control the operator.

The systems described above are lacking inasmuch as various control elements are provided in different locations. Some are provided at the operator head and some are added on and separate from a main control button or wall station. The add-on devices are susceptible to failure or damage and as such may interfere with the normal operation of system. And if the add-on device is in proximity to other devices the possibility of inadvertent button actuation is substantially increased. This is also true of the few devices which do provide all functions in one location. Indeed, current systems are simply not user friendly in that they can not be seen in the dark nor do they provide sufficient tactile distinctions to enhance their use. Nor do current systems provide an integrated auto-close feature in conjunction with other functions provided on a multi-function wall station. And these systems do not provide both the ability to easily disconnect and/or adjust the timing of the auto-close feature. Finally, the systems do not provide an auto-close feature that can only be enabled if a keyless entry transmitter or other remote transmitter is also taught to the operating system. In summary, current movable barrier operator systems do not provide a complete and integrated functional wall station that is ergonomically designed and efficient in use and operation.

DISCLOSURE OF INVENTION

It is thus an object of the present invention to provide a wireless transmitter for a door or gate that moves between an open and closed position. The door or gate is of the type that is moveable into an out-of-proximity position with respect to a fixed surface that is to be sealed relative to the door. The door or gate is coupled to a motorized operator which controls movement of the door. It is another object of the present invention to provide a wireless wall station transmitter which provides multiple functions in addition to the open/close function initiated by the motorized operator. It is a further object of the present invention to provide a wireless wall station transmitter device which is powered by a battery or other power source. It is yet another object of the present invention to provide a wireless wall station transmitter which is mountable anywhere in communication range of the motorized operator which controls the up and down movements of the door or gate and various other features associated with the door. It is yet another object of the present invention to provide a receiver coupled to the motorized operator to decode instructions sent from the wall station transmitter. It is still a further object of the present invention to provide a receiver which can handle multiple function instructions.

Yet still a further object of the present invention is to provide a radio frequency controlled wireless wall station for controlling the operational parameters of a door or gate operator that contains a plurality of switches or buttons to provide a plurality of functions and features. The wall station transmits an initial signal that sets a series of coded signals during installation and once the encoded series is set, each additional coded message within the coded set designates a separate function. These functions include, but are not limited to, the directional movement of the motorized object; the off and on function of the lights associated with the operator; the initiation of an operational profile, which is used to establish safety limits and the like; the initiation of a delay-to-close time; the raising of the door to a height that allows pet egress; and the learn function programming of additional remote transmitters and remote keyless entry pads.

Yet another object of the present invention is to provide additional functions which may include an auto-close feature wherein the auto-close feature is provided with an operator-set or a user-adjustable time period for allowing a door or barrier to remain open for a period of time prior to beginning of closure of the barrier. Still another function may provide for blocking of all other wireless or remote transmitters such that a wall station transmitter is the only transmitter recognized by the operator system. Still yet another

object of the present invention is to provide a function that permits the auto-close feature to only be enabled if a keyless transmitter is taught to the operator system. Still yet another object of the present invention is to provide an auto-close feature that is enabled only if a signal is previously received from a remote transmitter or a keyless transmitter.

5 Still further objects of the present invention allow for a wall station to provide a plurality of buttons wherein a certain plurality of buttons are concealed from immediate use. Yet another object of the present invention is to provide a wall station transmitter wherein selected buttons of the transmitter are illuminated for easy identification in a dimly lit environment. Still yet another object of the present invention is to provide for a
10 wall station which provides a cover that is used to conceal the certain plurality of buttons and wherein the cover is movable in the concealing position to allow for actuation of at least one of or a selected number of the concealed buttons. Still yet another object of the present invention is to provide for a wall station wherein the cover that is utilized to conceal at least some of the buttons is selectively illuminated. Another object of the
15 present invention is to provide a detachable cover to enclose batteries within a battery compartment of the wall station housing.

 In general, the present invention contemplates an operator system for moving a barrier comprising a motor for moving the barrier between opened and closed positions; an operator for controlling operation of the motor; and a wall station having a wall station
20 transmitter for sending operational signals to the operator, the wall station having an open/close button for actuating the motor to move the barrier in the appropriate direction, the wall station also having a manual-close/auto-close selector button, wherein if an auto-close mode is selected the operator automatically closes the barrier if left open for a predetermined period of time.

25 The present invention also contemplates an operator system for moving a barrier comprising a motor for moving the barrier between opened and closed positions; an operator for controlling operation of the motor; and a wall station having a wall station transmitter for sending operational signals to the operator, the wall station having an
30 open/close button for actuating the motor to move the barrier in the appropriate direction, and the wall station also having an auto-close blocking selector button which, if enabled, precludes the operator from receiving operational signals from any source other than the wall station.

5 The invention also contemplates an operator system for moving a barrier comprising a motor for moving the barrier between opened and closed positions; an operator for controlling operation of the motor; a wireless wall station having a wall station transmitter for sending operational signals to the operator, the wireless wall station having an open/close button for actuating the motor to move the barrier in the appropriate direction; and a light source illuminating the wireless wall station from within.

10 The invention further contemplates an operator system for moving a barrier comprising a motor for moving the barrier between opened and closed positions; an operator for controlling operation of the motor; and a wall station having a wall station transmitter for sending operational signals to the operator from a single transceiver, the wall station having an open/close button for actuating the motor to move the barrier in the appropriate direction; the wall station also having a blocking selector button which, if enabled, precludes the operator from receiving operational signals from any source other than the wall station transmitter, the wall station including a panel carrying the open/close switch and the selector switch, and a cover positionable with respect to the panel, wherein the cover in a first position permits access to the switch and in a second position conceals said switches but allows actuation of the open/close switch.

20 The invention further contemplates an operator system for moving a barrier comprising a motor for moving the barrier between opened and closed positions; an operator for controlling operation of the motor; and a wall station having a wall station transmitter for sending operational signals to the operator, the wall station having an open/close button for actuating the motor to move the barrier in the appropriate direction; the operator capable of receiving operational signals from the wall station transmitter and any programmed transmitter; the wall station also having a manual-close/auto-close/block button, wherein if a manual-close mode is selected the operator only closes the door upon receipt of a door close signal from one of the wall station and the programmed transmitter, wherein if an auto-close mode is selected, the operator automatically closes the barrier if left open for a predetermined period of time; and wherein if a block mode is selected, the operator is precluded from receiving operational signals from any source than the wall station transmitter.

30 And the present invention contemplates a wall station for transmitting signals to an operator that moves a motorized barrier, comprising a panel; an open/close button carried by the panel, wherein actuation of the open/close button causes the operator to move the

barrier in an appropriate direction; at least one other function button carried by the panel, wherein actuation of the other function button causes the operator to perform the corresponding function; and a cover positionable with respect to the panel, wherein the cover in a first position permits access to the buttons and in a second position conceals the buttons but allows actuation of the open/close button.

The invention further contemplates a wall station transmitter for sending operational signals to an operator that controls movement of a barrier comprising a housing having a battery compartment, the housing having a ledge at one end of the battery compartment and a ridge at an opposite end of the battery compartment, the ledge having a groove adjacent a nub, and the ridge having a notch; and a battery cover that detachably encloses the battery compartment, the cover having a catch at one end and a latch of an opposite end, the latch mateably received in the notch and the catch mateably received by the groove.

BRIEF DESCRIPTION OF THE DRAWINGS

For a complete understanding of the objects, techniques and structure of the invention, reference should be made to the following detailed description and accompanying drawings, wherein:

Fig. 1 is an operational system for a motorized barrier operator according to the present invention;

Fig. 2 is a front perspective view of a multi-function wall station embodying the concepts of the present invention;

Fig. 3 is a rear perspective view of the multi-function wall station;

Fig. 4 is a front exploded elevational view of the multi-function wall station with the hinge cover in a closed position;

Fig. 5 is a side elevational view of the multi-function wall station with the battery cover removed;

Fig. 6 is an operational flowchart setting out the operational steps for the auto-close feature;

Fig. 7 is an operational flowchart wherein the auto-close feature is only enabled if an open command is received from an external transmitter; and

Fig. 8 is a partial elevational view of the housing's battery compartment with a front panel of the housing removed.

PREFERRED EMBODIMENT FOR CARRYING OUT THE INVENTION

An operating system for a motorized door or gate operator according to the concepts of the present invention, depicted in Fig. 1 of the drawings, is generally indicated by the numeral 10. The system 10 may be employed in conjunction with a wide variety of movable barrier doors or gates, wherein the doors are of the type utilized in garages, commercial and utility buildings, and other structures, as well as windows or other closure members, all of which may be linear, curved, or otherwise non-linear, in whole or in part. Such barriers or other members are commonly constructed of a variety of materials such as wood, metal, various plastics, or combinations thereof. The lower extremity of doors or other member of these various types may be substantially rectangular or may be profiled in any number of ways for the positioning of reinforcing members or other purposes. In the preferred use, the present invention is utilized with residential-type garage doors. Generally, the system 10 of the present invention employs a multi-function wall station generally designated by the numeral 12. The wall station 12 is typically placed near a pedestrian door that enters the garage from the interior of the house and is positioned at a convenient height, preferably five feet above the ground. The wall station 12 includes a housing typically made of polymeric material, wherein at least a portion of the housing is removable to allow access to the internal workings thereof when needed.

The wall station 12 includes a battery compartment 15 (best seen in Fig. 5) for receiving a power supply 16 which is preferably two AAA dry cell batteries. The power supply is used to provide electrical power to various components contained within the wall station as will become apparent as the description proceeds. It will be appreciated that power could be received from a residential power source or equivalent if desired. If such is the case then appropriate transformers will be needed to power the internal components. In any event, use of the dry cell batteries provide the necessary power and allow for the wall station to be placed anywhere within communication range of the operator and eliminates the need for obtaining power directly from the operator or other source. One component which is connected to the power supply is a logic control 18 which is a microprocessor based circuit that provides the necessary hardware, software and memory for implementing the functions to be described. An LED 20 is connected to the logic control and receives power from the power supply 16 in a manner well known in the art. Also connected to the logic control 18 may be a liquid crystal display 22 or other low-

power display for providing operational information related to the wall station 12 and/or other components of the operating system 10.

The logic control 18 generates various signals 26 which are used by a transmitter 28 for conversion to a radio frequency signal (RF) that is emitted by an antenna 30. Of course other wireless types of signals, such as infrared or acoustic, could be generated by the transceiver 28 if desired. The transmitter may also function as a transceiver to allow for display of operator status information on liquid crystal display 22. As used herein, the term "transceiver" indicates that the device can both transmit and receive wireless signals. In any event, it will be appreciated that in the preferred embodiment the wall station 12 is a wireless device; however, if the need arises a wire could be used to directly transmit the signal 26.

The wall station 12 includes a plurality of input switches or buttons designated generally by the numeral 36. These input switches, when actuated, allow the user to control various features of the operating system. The switches 36 include an up/down switch 38; a 3-way selection switch 40, which provides the modes of manual close, auto-close, and radio frequency blocking; an install switch 42; a delay close switch 46; a pet height switch 48; and a light on/off switch 50. The up/down switch 38 is actuated whenever the user wants to move the barrier from an up condition to a down condition or vice versa. The 3-way selection switch 40 provides for different operational modes. Briefly, the manual close mode allows the operating system 10 to operate in much the same manner as would a normal operating system inasmuch as user input is required to open and close the movable barrier. The auto-close feature allows for the movable barrier to close if left in a fully open position for a predetermined period of time and provided that other conditions are met. The radio frequency blocking feature is for when a user is on vacation and desires that no external or remote transmitters allow for operation of the movable barrier. The install switch 42 provides for an installation routine to set the operational limits of the movable barrier with respect to the other physical parameters of the movable barrier. In other words, barrier travel limits and force profiles are generated during the actuation of the install routine. The delay close switch 46 allows for a user to exit the enclosed area within a predetermined period of time without inadvertently actuating safety features such as photoelectric eyes and the like. The pet height switch 48 allows for the door to be moved to a minimal open position of anywhere from 4 to 12 inches to allow the ingress and egress of small pets. The light switch 50 may be activated